

# Idaho 4th Grade Direct Mathematics Assessment

## 2004 4<sup>th</sup> GRADE MAIN RANGEFINDER 2

Your teacher will read the entire test to you before you begin.  
Do not use a calculator on this assessment.

Frequent Computational or Surface Errors

1. Jason has a notebook to record the number of birds he studies each year. Last year he recorded 987 bluebirds, 834 robins, 566 sparrows, and 1,028 crows.



- a. How many birds did he record altogether last year? Show or explain how you found your answer.

$$\begin{array}{r} 11 \\ + 8 \\ \hline 19 \\ + 2566 \\ \hline 1028 \\ + 12 \\ \hline 3395 \end{array}$$
  
$$\begin{array}{r} 12 \\ 987 \\ + 13 \\ \hline 25 \end{array}$$
  
$$\begin{array}{r} 17 \\ + 6 \\ \hline 23 \end{array}$$

- b. How many more crows did Jason see than bluebirds? Show or explain how you found your answer.

$$\begin{array}{r} 09 \\ - 8128 \\ \hline 987 \\ \hline 041 \end{array}$$

- c. Jason also saw 32 goldfinches each month. How many did he see at the end of four months? Show or explain how you found your answer.

$$\begin{array}{r} 32 \\ 32 \\ 32 \\ + 32 \\ \hline 128 \end{array}$$

- d. Jason drew 21 birds in his notebook. He drew three birds on each page. How many pages did he need for all 21 birds? Show or explain how you found your answer.

$$3 \overline{) 21}$$

Read problems 2, 3, 4, and 5 on this and the next two pages. Select three problems to answer. Answer ALL of the parts of the three problems you select to answer. Cross out the one problem that you do not choose to answer.

2. a. Using a ruler, construct (draw) a quadrilateral that is **2 inches** wide and **3 inches** long. Measure carefully.

- b. Using a ruler, construct (draw) a quadrilateral that is **3 centimeters** wide and **6 centimeters** long. Measure carefully.

- c. Construct (draw) your own geometric shape. **Label** the measurements of each side.

- d. What kind of geometric shape did you draw in part c?

3. The students in Mrs. Taylor's class took a poll of their favorite types of books. The results are listed below.

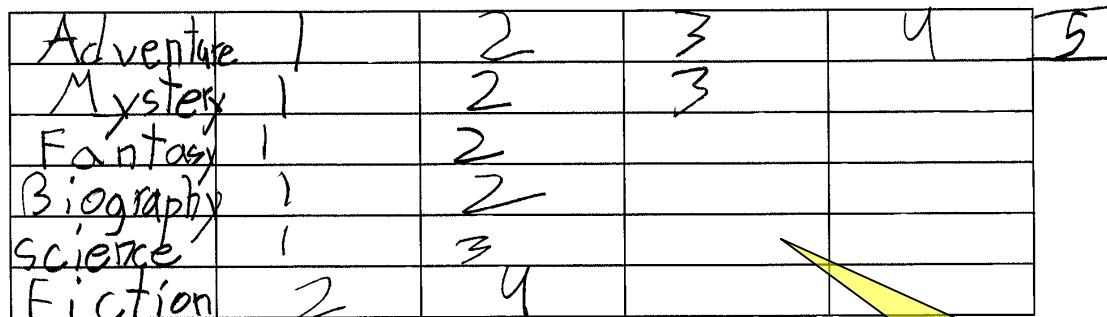
Student	Type of Book	Student	Type of Book
Austin	Adventure	Jason	Biography
Logan	Mystery	Calli	Biography
Caitlyn	Adventure	Seth	Science Fiction
Brandon	Mystery	Jade	Adventure
Jose	Adventure	Sean	Science Fiction
Nicole	Fantasy	Cielito	Science Fiction
Paris	Fantasy	Kortney	Science Fiction
Nico	Mystery	Payton	Adventure

Struggles to Communicate Effectively

- a. Use tally marks to show how many students choose each type of book.



- b. Use the class information to make a graph. Label the graph.



Limited Structure

- c. Study the graph. Write two facts you learned from the graph.

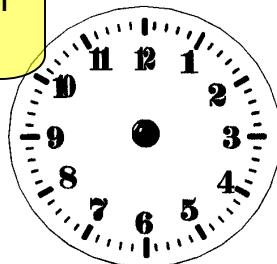
I learned how many students and how many different kinds of books,

4. Sam reads 20 minutes each day.

a. How much time does he read in one week?  
Show or explain how you found your answer.

$$\begin{array}{r} 4 \\ \times 7 \\ \hline 28 \end{array}$$

Limited Understanding of Situations



b. Sam goes to bed at 8:45 PM. If he wants to read 20 minutes before going to bed, what time must he start reading? Show or explain how you found your answer.

Limited Mathematical Vocabulary,  
Use of Symbols and Communication  
Skills

$$\begin{array}{r} 8:45 \\ - 20 \\ \hline 8:35 \end{array}$$

c. The next morning Sam finishes breakfast at 7:50 AM. If he starts reading at 7:50 AM, what time will he finish his reading for the day? Show or explain how you found your answer.

Limited Process Development

$$\begin{array}{r} + 7:50 \\ 20 \\ \hline 7:70 \end{array}$$

5. There are three numbers in Chrissy's bicycle lock combination. They are 2, 7, and 9. Unfortunately, Chrissy cannot remember the correct order of the three numbers.

a. List all possible ways the numbers could be ordered for Chrissy's lock.

$$\begin{array}{ll} 972 & 279 \\ & 927 \end{array} \quad \begin{array}{ll} 792 & 297 \end{array} \quad \begin{array}{ll} 297 & 729 \end{array}$$

b. It takes Chrissy **30 seconds** to try each different order. If she has to try them all, how long will it take for her to open her lock? Show or explain how you found your answer.

Struggles to Communicate Effectively

$$\begin{array}{c} 30 \\ 30 \\ 30 \\ 30 \\ 30 \\ 30 \\ 30 \end{array} \quad \begin{array}{l} 1 \text{ min} \\ 10 \text{ sec} \end{array}$$

c. Nick's lock combination has four numbers: 2, 7, 9, and 5. How many possible ways might these numbers be ordered? Show or explain how you found your answer.

$$\begin{array}{ll} 5921 & 5279 \\ & 2759 \end{array} \quad \begin{array}{ll} 9352 & 7952 \\ & 2579 \end{array} \quad \begin{array}{ll} 1257 & 5972 \end{array}$$